Tilden-Coil Constructors, Inc.

Tilden-Coil Selects Prolog® Software to Standardize Processes, Automate Workflow and Provide Web-Based Collaboration on US$210M Bond Program

Founded in 1938, Tilden-Coil Constructors, Inc. has enjoyed moderate, controlled growth for over 70 years. Tilden-Coil is a full service general contracting and construction management firm that specializes in institutional, commercial, industrial and environmental projects. The company's services are tailored to handle the specialized needs of each client and include assistance with funding applications, land acquisition, reuse of drawings, local bond measures and sustainability development.

Tilden-Coil has carefully developed a company culture that fosters an atmosphere of teamwork, a high degree of integrity in all business dealings and visionary thinking. This culture has led the company to find success through emerging construction delivery methods, such as lease-leaseback, Integrated Project Delivery (IPD) and design-build. Ultimately, these delivery methods allow Tilden-Coil to provide better value to their clients.

Today, Tilden-Coil is a leader in a number of markets, including education, entertainment, historic renovation, seismic retrofit, commercial, corporate and environmental construction. Recent company recognitions include the 2011 Business of the Year award by the Greater Riverside Chamber of Commerce and a 2011 Vision Award from Constructech magazine. In addition, Tilden-Coil's founder, Henry Coil, Jr., has received multiple awards throughout his lifetime. Most recently, he received the 2011 Roy Hord Volunteer of the Year award by the Riverside Downtown Partnership (RDP) for dedicating his time and talent to the city of Riverside, California.

Tilden-Coil embraces technological advancements that translate into measureable benefits for their clients. This includes the use of Building Information Modeling (BIM) on nearly all projects. The adoption of BIM and other technologies has translated into quantifiable benefits such as shortened schedules, reduced construction costs and higher quality facilities.

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> *Jerome Martinez, IT Manager*
> *Tilden-Coil Constructors, Inc.*

For the past seven years, Tilden-Coil has been using Prolog Manager from Meridian Systems to standardize project, program and construction management processes. More than 60 of Tilden-Coil's 90+ employees use Prolog Manager on a daily basis for everything from cost and field management to change and document management. "I believe we use every single module that Prolog Manager offers," says Tilden-Coil IT Manager Jerome Martinez.

When Tilden-Coil was presented with a unique project opportunity, however, their Prolog solution would be put to the test.

A Unique Project Opportunity

In late 2010, Cerritos College chose Tilden-Coil to take over program and construction management duties in the middle of a US$210M G.O. bond program, which was approved by voters in 2004 and is known as Measure CC. Measure CC will fund the repair and renovation of aging facilities, and construct new facilities to relieve overcrowding and meet the demands of projected student enrollment growth.

Since Tilden-Coil was stepping into a program that was already underway, one of the contractual requirements was to replicate the previous construction management firm's program management system, which included a Web-based interface that allowed the client, architect and contractors to enter and answer Requests-For-Information (RFIs), access change order information and generate status reports. Although Prolog Manager would provide a strong, flexible and configurable foundation for managing the Cerritos College bond program, Tilden-Coil needed to add Web-based functionality.

The Perfect Prolog Solution

Taking over for another construction management firm in the middle of a bond program is no easy task, especially when faced with the need to replicate technology processes that are already in place. In addition, the timeline was tight: Tilden-Coil had just four weeks to implement a Prolog solution that mirrored the current Cerritos College system. "We're a client-centered construction manager," Martinez says, "so I was tasked with making sure that happened."

With eight projects in various stages of construction, implementation delays could cost Tilden-Coil US$35K or more for each week that the new system was not operable. Fortunately, Meridian had recently released Prolog Converge, a flexible Web-based project management application that improves collaboration and shares the Prolog Manager database. By using Prolog Converge with Prolog Manager, Tilden-Coil could quickly achieve success. "I was familiar with Prolog Converge," Martinez states, "and knew it was the perfect solution for Cerritos College."

A Fast-Track Implementation

In December of 2010, Tilden-Coil purchased Prolog Converge and worked with a Meridian Value-Added Reseller (VAR) to fast-track the implementation of Prolog Manager and Prolog Converge on the bond program. "The VAR understood our sense of urgency and worked hard to meet the aggressive deadline imposed by Cerritos College," Martinez recalls. "I was doubtful that the implementation could even be done in four weeks, but we made it happen."

With Prolog Manager and Prolog Converge, Tilden-Coil had a highly flexible toolset that was configured to assimilate the current Cerritos College project management processes. "The benefits of adding Prolog Converge to Prolog Manager are many," says Martinez. "Together, the two applications standardize workflow and document management for the extended project team; provide a centralized place for collaboration and communication; and provide features like automatic e-mail notifications that increase efficiency." In addition, the Prolog-driven platform also allowed Tilden-Coil to integrate additional technologies, such as BIM, to actually improve on the client's previous program management system.

Adding up the Advantages

As work on Measure CC moves forward, Tilden-Coil continues to discover the many advantages of their new, more robust Prolog Solution - advantages that benefit Cerritos College now, and will benefit Tilden-Coil's other clients down the road.

These advantages include:

A more efficient RFI process. Using Prolog Converge, the contractor enters RFIs from the job site and the architect is immediately notified by e-mail that those RFIs need to be answered. The architect enters a response in Prolog Converge, which is automatically sent to the contractor. When this process was handled the traditional way on paper, two or three days could pass before an answer was back in the contractor's hands. "Now," says Martinez, "if people are in front of their computers, the entire process can be completed in minutes."

Integration with BIM. Tilden-Coil has integrated Prolog Converge with BIM, which allows the company to upload 3-D images that highlight constructability issues into Prolog Converge, and enter RFIs to put these issues in front of the construction team. The 3D building models allow for early discovery of coordination issues within the building design, and the Web-based project management software allows those issues to be fully incorporated, documented and conveyed to the client and field crews.

Collaborative online workflow. Tilden-Coil's Prolog solution delivers a centralized system for storing and retrieving all project and program related information, which has created a truly collaborative project team

environment. "In the past," Martinez explains, "this type of collaboration would have required time-consuming physical meetings. With Prolog Converge, fewer meetings are needed because we can communicate online."

Increased customer satisfaction. Tilden-Coil's Prolog solution also gives Cerritos College on-demand access to project and program reports from any computer with an Internet connection. In addition, Prolog Converge has an easier-to-use interface compared to the College's previous Web-based tool. This accessibility and usability has improved customer satisfaction.

Reduced operating costs. Tilden-Coil predicts that, by using Prolog Converge with Prolog Manager, automation will increase the efficiency and effectiveness of their employees, thereby reducing operating costs. "Our staff spends less time on tasks that are now automated by Prolog Converge," Martinez says. "In the future, that is certain to pay off."

A tool for business development. Martinez also views the company's Prolog solution as a powerful tool for business development. "Since we have Prolog Manager and Prolog Converge," he says, "our clients have less to worry about. They don't have to go through the pain of implementing their own system because we can provide a Web-based tool that takes care of everything, including collaboration. It's an awesome selling point for our business development team."

Achieving a Collaborative Project Environment

Overall, Tilden-Coil is excited by the possibilities presented by their enhanced Prolog solution. "We originally purchased Prolog Manager to improve project controls and establish companywide process standardization. Adding Prolog Converge makes our system even better," Martinez concludes. "Going forward, I believe that Prolog Converge will play a key role on all our projects. Having a centralized Prolog system that standardizes our workflow, increases efficiency and improves collaboration is simply priceless. By being a more collaborative team, we improve the entire project."

Tilden-Coil
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Tilden-Coil Constructors, Inc. Project Profile

Cerritos Community College District Measure CC Bond Program

Founded in 1955, Cerritos College is a public comprehensive community college serving an area of 52 square miles of California's southeastern Los Angeles county. The college offers degrees and certificates in 87 areas of study in nine divisions. Over 1,200 students successfully complete their course of studies each year.

On March 2, 2004, the voters in the Cerritos Community College District approved Measure CC, a $210 million General Obligation (G.O.) Bond for Cerritos College. Measure CC will fund the repair and renovation of aging facilities and construct new facilities to relieve overcrowding and meet the demands of projected growth in student enrollment.

Key Project Elements

> Modernization and repair of aging facilities

> Health, safety and security improvements

> Upgrades to infrastructure and information technology systems

> Construction of new classrooms, science and technology labs, parking and student support facilities

> Energy conservation and recycling improvements

> Furniture and equipment upgrades and replacement

Estimated Cost: US$206M - $231M

Anticipated Results: Many of the classrooms, labs and infrastructure systems (roofs, plumbing, electrical, heating and sewer) on the Cerritos College campus are nearly 50 years old. Deterioration due to age and decades of heavy use must be addressed to ensure safe and appropriate facilities for the students. Measure CC will address the most urgent repairs and renovations needed to make classrooms safe and capable of supporting current and future educational needs.

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